What is claimed is:

1. A method of diagnosing multiple sclerosis in a subject, the method comprising

providing a test sample from a subject;

detecting in said test sample at least one antibody selected from the group consisting of an anti-Glc (α) antibody, an anti-Glc (α 1-4) Glc (α) antibody, an anti-Glc (α 1-4) Glc (β) antibody, an anti-Glc (β) antibody, an anti-Gal (β) antibody; an anti-Glc (β 1-4) Glc (β 1-4) Glc (β) antibody, an anti-GlcNAc (β 1-4) GlcNAc (β) antibody, an anti-L-Araf (α) antibody, an anti-L-Rha (α) antibody, an anti-Gal (β1-3) [GlcNAc (β1-6)] GalNAc (α)antibody, an anti-Gal (β 1-4) GlcNAc (α)antibody, an anti-Gal (β 1-3) GalNAc (α) antibody, an anti-Gal (β 1-3) GlcNAc (β) antibody, an anti-GlcA (β) antibody, an anti-GlcA (β) antibody, and an anti-Xyl (α) antibody; and

comparing the levels of said at least one antibody in said test sample to the levels of said at least one antibody in a control sample, wherein said control sample is selected from the group consisting of one or more individuals that have multiple sclerosis symptoms and have a known multiple sclerosis status, and one or more individuals that do not show multiple sclerosis symptoms,

thereby diagnosing multiple sclerosis in said subject.

2. The method of claim 1, wherein said method comprises

detecting an anti-Glc (α) antibody in said test sample; and

comparing the levels of said antibody in said test sample to said control sample.

3. The method of claim 1, wherein said method comprises

detecting an anti-Glc (α 1-4) Glc (α) antibody in said test sample; and

4. The method of claim 1, wherein said method comprises

detecting an anti- Glc (α 1-4) Glc (α) antibody and an anti-Glc (α) antibody in said test sample; and

comparing the level of said antibodies in said test sample to said control sample.

5. The method of claim 1, wherein said control sample consists essentially of a population of one or more individuals that have multiple sclerosis symptoms with a known multiple sclerosis status.

6. The method of claim 1, wherein said test sample is a biological fluid.

7. The method of claim 6, wherein said biological fluid is whole blood, serum, plasma, spinal cord fluid, urine, or saliva.

8. The method of claim 1, wherein said biological fluid is serum.

9. The method of claim 1, wherein said subject is a female.

10. The method of claim 1, wherein said subject is a male.

11. The method of claim 1, wherein said at least one antibody is an IgM type antibody.

12. The method of claim 1, wherein said at least one antibody is an IgA type antibody.

13. The method of claim 1, wherein said at least one antibody is an IgG type antibody.

14. The method of claim 2, wherein said anti-Glc (α) antibody is an IgM type antibody.

15. The method of claim 3, wherein said anti-Glc (α 1-4) Glc (α) antibody is an IgM type antibody.

16. The method of claim 1, wherein said diagnosis is an early diagnosis of multiple sclerosis.

17. The method of claim 1, wherein said control sample is determined using an Expanded Disability Status Scale (EDSS) assessment or a Magnetic Resonance Imaging (MRI) assessment.

18. The method of claim 1, wherein said control sample is determined using an Expanded Disability Status Scale (EDSS) assessment.

19. The method of claim 1, wherein said method comprises detecting at least two of said antibodies.

20. The method of claim 1, wherein said method comprises detecting at least four of said antibodies.

21. The method of claim 1, wherein said method comprises detecting at least six of said antibodies.

22. A method of diagnosing a multiple sclerosis exacerbation in a subject, the method comprising

providing a test sample from a subject;

detecting an anti-Glc (α) IgM type antibody or an anti- Glc (α 1-4) Glc (α) IgM type antibody in said test sample; and

comparing the levels of said antibody in said test sample to a control sample, wherein said control sample is derived from one or more individuals whose multiple sclerosis status is known,

thereby diagnosing multiple sclerosis exacerbation in said subject.

23. The method of claim 22, wherein said method comprises

detecting an anti-Glc (α) IgM type antibody in said test sample; and

comparing the levels of said antibody in said test sample to said control sample.

24. The method of claim 22, wherein said method comprises

detecting an anti-Glc (α 1-4) Glc (α) α IgM type antibody in said test sample; and

comparing the levels of said antibody in said test sample to said control sample.

25. The method of claim 22, wherein said method comprises

detecting an anti-α-Glucose IgM type antibody and an anti-Glc (α 1-4) Glc (α) α IgM type antibody in said test sample; and

comparing the levels of said antibodies in said test sample to said control sample.

26. The method of claim 22, wherein said control sample consists essentially of a population of one or more individuals in remission multiple sclerosis status that do not show symptoms of a multiple sclerosis exacerbation, and a multiple sclerosis exacerbation is diagnosed in said subject if more anti-Glc (α) antibody or anti-Glc (α 1-4) Glc (α) antibody is present in said test sample than in said control sample.

27. The method of claim 22, wherein said control sample consists essentially of a population of one or more individuals that their multiple sclerosis status in exacerbation, and show symptoms of a multiple sclerosis exacerbation, and a multiple sclerosis exacerbation is diagnosed in said subject if similar anti-Glc (α) antibody or anti-Glc (α 1-4) Glc (α) antibody levels is present in said test sample and in said control sample.

28. The method of claim 22, wherein said test sample is a biological fluid.

29. The method of claim 28, wherein said biological fluid is whole blood, serum, plasma, spinal cord fluid, urine, or saliva.

30. The method of claim 28, wherein said biological fluid is serum.

31. The method of claim 22, wherein said subject is a female.

32. The method of claim 22, wherein said subject is a male.

33. The method of claim 22, wherein said diagnosis is an early diagnosis of multiple sclerosis exacerbation.

34. The method of claim 22, wherein said subject has been treated by subcutaneous administration of interferon beta.

35. The method of claim 22, wherein said subject has been treated by subcutaneous administration of glitamerer acetate.

36. A method for assessing multiple sclerosis disease severity in a subject, the method comprising

providing a test sample from a subject;

determining whether said test sample contains an anti-α Glucose IgM type antibody or an anti-Glc (α 1-4) Glc (α) IgM type antibody; and

comparing the level of said at least one antibody in said test sample to a control sample, wherein said control sample is derived from one or more individuals whose multiple sclerosis disease severity is known.

thereby assessing of multiple sclerosis severity in said subject.

37. The method of claim 36, wherein said method comprises

detecting an anti- Glc (α) IgM type antibody in said test sample; and

comparing the levels of said antibody in said test sample to said control sample.

38. The method of claim 35, wherein said method comprises

detecting an anti-Glc (α 1-4) Glc (α) IgM type antibody in said test sample; and

comparing the levels of said antibodies in said test sample to said control sample.

39. The method of claim 35, wherein said method comprises

detecting an anti- Glc (α 1-4) Glc (α) IgM type antibody and an anti- Glc (α) IgM type antibody in said test sample; and

comparing the level of said antibodies in said test sample to said control sample.

40. The method of claim 36, wherein said control sample consists essentially of a population of one or more individuals whose multiple sclerosis disease severity is defined by Expanded Disability Status Scale (EDSS), changes in an EDSS score, or a Magnetic Resonance Imaging (MRI) assessment.

41. The method of claim 36, wherein said test sample is a biological fluid.

42. The method of claim 41, wherein said biological fluid is whole blood, serum, plasma, spinal cord fluid, urine, saliva.

43. The method of claim 41, wherein said biological fluid is serum.

44. The method of claim 36, wherein said subject is a female.

45. The method of claim 36, wherein said subject is a male.

46. The method of claim 36, further comprising selecting a therapeutic agent for treating multiple sclerosis, the method comprising

determining whether said test sample contains anti Glucose α antibody ; and

selecting a therapeutic agent and dosage regimen based on the relative levels of said antibody in said subject sample and said control sample.

47. The method of claim 46, wherein said method further comprises

determining whether said test sample contains an anti-Glc (α 1-4) Glc (α) antibody; and

comparing the levels of said an anti-Glc (α 1-4) Glc (α) antibody in said test sample to levels of antibody in a control sample consisting essentially of one or more individuals whose multiple sclerosis status is known.

48. A kit for diagnosing symptoms associated with multiple sclerosis, the kit comprising:

a first reagent that specifically detects an anti-Glc (α 1-4) Glc (α) antibody;

a second reagent that specifically detects an anti-Glc (α 1-4) Glc (α) antibody; and

directions for using said kit.

49. The kit of claim 48, further comprising a reagent that specifically detects an IgM type antibody.